

IN THE ABSTRACT:

Pursuant to 37 C.F.R. §1.121, please amend the abstract as follows:

Replace the abstract with the attached abstract.

REMARKS

Reconsideration of this application is requested. The specification has been amended as suggested at paragraph 7 of the June 5, 2002 Office Action. Claims 1 and 2 have been canceled without prejudice. Claim 3 has been amended to remove the limitation that the dispersion liquid is free of aromatic and olefin substances. Claim 3 has also been amended as discussed below and to correct an editorial error, i.e., to specify that the vacuum container is reduced to deaerate resolved gas from a deaerated liquid *through* said transmission film. Claim 4 has been added. Support for claim 4 is found at, for example, original claim 3. No new matter has been added. Claims 3 and 4 are pending and at issue.

In the June 5, 2002 Office Action, the Examiner stated that claim 3 would be allowable if amended to overcome the rejection under 35 U.S.C. §112, second paragraph.

Claims 1-3 have been rejected under 35 U.S.C. §112, second paragraph, as indefinite. The Examiner asserts that it is unclear what the relationship is between the “particle plastic substrate” and the “transmission film” and “paste material” in claims 1 and 3.

Claim 3 has been amended to clarify that the transmission film is manufactured from a paste material mixture which comprises (a) a particular dispersion liquid and (b) a particle plastic substrate. Applicant respectfully submits that this amendment does not narrow the scope of claim 3 and requests withdrawal of this rejection.

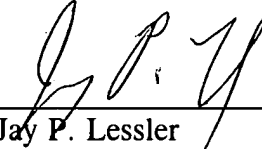
Claims 1 and 2 have been rejected under 35 U.S.C. §102(b) as anticipated by Glatz et al.

Claims 1 and 2 have been canceled without prejudice. Accordingly, this rejection is moot.

In view of the above amendments and remarks, it is respectfully requested that the application be reconsidered and that all pending claims be allowed and the case passed to issue.

If there are any other issues remaining which the Examiner believes could be resolved through either a Supplemental Response or an Examiner's Amendment, the Examiner is respectfully requested to contact the undersigned at the telephone number indicated below.

Respectfully submitted



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Marked-Up Specification and Claim
Accompanying November 19, 2002 Response
For U.S. Serial No. 09/881,574
(Docket No. 4110/1F080-US1)

IN THE SPECIFICATION:

Page 1, lines 15-16:

This application is a continuation-in-part of application Serial No. 09/303,980, filed May 3, 1999, now abandoned, which is hereby incorporated by reference in its entirety.

Page 1, lines 19-26:

The present invention relates to a vacuum deaeration device in which a transmission film for allowing only gas to pass therethrough and preventing liquid from being transmitted is mounted within a vacuum container, a pressure within the vacuum container is reduced by a vacuum pump or the like to [deaerated] deaerate resolved gas from liquid (deaerated liquid) contacted with the aforesaid transmission film. More particularly the invention is a vacuum deaeration device suitable for removing resolved gas from liquid (deaerated liquid) in various kinds of production process facilities, such as a liquid chromatograph as well as various kinds of physical and chemical and analytical devices, pharmaceutical engineering, semi-conductors and liquid crystals.

Page 2, lines 4-15:

The transmission film used in this type of deaeration device is usually manufactured [by7] by a method wherein residual gasoline substances (e.g., naphtha or white oil) are added

to and mixed with a powder fluorine plastic substrate to form paste. The [past] paste material is extruded and [backed] baked under a relatively high temperature (approximately 100°C to approximately 400°C).

At this time, liquid of a relatively low boiling point such as the aforesaid gasoline residuals is evaporated during the baking operation and removed. However, actually, liquid of relatively low boiling point, in particular, aromatic substances and olefin substances are not completely evaporated and a relatively small amount of the substances remain in the transmission film. These remaining substances in the transmission film are freely separated when liquid (deaerated liquid) is contacted with the transmission film, resolved into deaerated liquid, and bad influence (a measurement error) is applied to the measurement result performed by the liquid chromatograph device or quality keeping controls in various kinds of production processes.

Page 3, lines 18-24:

In the case of the exemplary preferred embodiment shown in Figure 1, the vacuum deaeration device is construed so that the transmission film 2 is formed into a tube with a predetermined length. One or a plurality of films are mounted within the vacuum container and at the same time a liquid inlet 21 and a liquid outlet 22 of the tube-shaped transmission film 2 is placed outside the vacuum container 1. The deaerated liquid flows from the liquid inlet 21 of the tube-shaped transmission film 2 while a pressure of the inside part of the vacuum container 1 is reduced using a vacuum pump 3. Resolved liquid is deaerated from the deaerated liquid while the liquid is discharged out of the outlet 22.

Page 4, lines 12-17:

The dispersion liquid added to and mixed with [partible] particle plastic substrate is a single solution of relatively high volatility that does not comprise aromatic substances and olefin substances, such as linear chain-like paraffin substances that do not comprise non-saturated hydrocarbon. In one embodiment of the present invention, the dispersion liquid is composed of at least two substrates selected from the group of n-hexane, n-heptane, and n-octane, not containing any aromatic and olefin substances.

Page 5, lines 13-23:

In accordance with the vacuum deaeration device of the present invention, a dispersion liquid of relatively high volatility comprising a single solution not containing both aromatic substances and olefin substances is added to a particle plastic substrate to form a paste material. The paste material is extruded, baked and used as a transmission film for allowing only gas to pass while preventing liquid from being transmitted. Therefore, the aromatic substances and olefin substances are not originally present at the transmission film contacted with the deaerated liquid, thereby eliminating the possibility that both aromatic substances and olefin substances are freely separated and resolved into the deaerated liquid when the deaerated liquid is contacted with this transmission film. As a result, [there] no possibility exists that a bad influence (a measurement error or the like) will be applied to a measurement result performed by the liquid chromatograph device or quality keeping control at various kinds of production processes.

IN THE CLAIMS:

3. (Amended) A vacuum deaeration device comprising:

a vacuum container; and

a transmission film mounted in said vacuum container, said transmission film allowing only gas to pass and preventing liquid from being transmitted, pressure [with in] within said vacuum container being reduced to deaerate resolved gas from deaerated liquid through said transmission film, said transmission film being manufactured from a paste material mixture that is extruded and baked [of], the paste material mixture comprising (a) a dispersion liquid composed of at least two substrates selected from the group consisting of n-hexane, n-heptane, and n-octane, [not containing any aromatic and olefin substances,] and (b) particle plastic substrate [that is extruded and baked].

IN THE ABSTRACT:

ABSTRACT OF THE DISCLOSURE

This invention's object is to eliminate a possibility that both aromatic substances and olefin substances are resolved into deaerated liquid contacted with a transmission film. As a transmission film for allowing only gas to pass and preventing liquid from being passed therethrough, there is applied a product of high volatile characteristic in which dispersion liquid composed of single solution is added to particle plastic substrate to form paste material is extruded and baked.

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